

**Deactivation and Decommissioning
Focus Area
Annual Performance Plan
FY 2000**

**September 30, 1999
Revision 0**

Field Focus Area Manager

Lead Laboratory Manager For Focus Area

Host Site Assistant Manager for EM

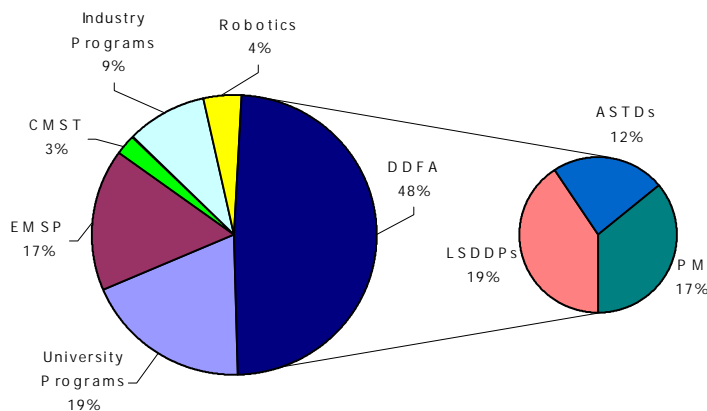
Headquarters Focus Area Program Manager

I. Introduction

Since 1995, the Deactivation and Decommissioning Focus Area (DDFA) has implemented an aggressive program designed to achieve rapid deployment of D&D technologies. The centerpiece of the DDFA has been the Large-Scale Demonstration and Deployment Program (LSDDP) concept. Within the LSDDP construct, full-scale new and improved technologies are demonstrated within an active and ongoing D&D project. These demonstration projects are co-funded with the end-user organization to compare the benefits from using a suite of improved D&D technologies against those associated with baseline technologies. Primary drivers of this work are the reduction of near-term D&D costs/mortgages, the reduction of risk to workers involved in the cleanups, and the recycle (where feasible) or reduction of the large amounts of waste generated from the D&D activities. The results of the LSDDPs—seven LSDDPs have been initiated since 1995—bear witness to their success in meeting high-priority, near-term needs. As D&D progresses throughout the complex, new technology needs are identified and new program priorities are established. As such, the DDFA portfolio of projects evolves accordingly.

This Annual Performance Plan reflects the FY2000 financial plan for the DDFA at the 80 percent funding level. The FY2000 budget of \$14.2 million is presented in Table 1, which includes the Crosscutting and Industry Programs, as well as continued funding for the Accelerated Site Technology Deployment program. Also included in Table 1 is funding for University Programs and

Table 1. DDFA FY2000 Funding	80%	100%
DDFA LSDDPs & Initiatives	\$4,404	\$5,911
ASTDs	\$2,587	\$2,587
Program Management	\$3,730	\$3,730
<i>subtotal</i>	\$10,721	\$12,228
CMST	\$560	\$860
Robotics	\$875	\$1,275
Industry Programs	\$2,072	\$2,749
<i>subtotal</i>	\$14,228	\$17,112
University Programs	\$4,150	\$4,150
EM SP	\$3,634	\$3,634
<i>total</i>	\$22,012	\$24,896



continued funding for the EM Science Program grants. Thus, the total focus area budget (80%) for FY2000 is \$22.0 million. For comparison, the 100 percent funding level budget has also been presented, and Figure 1 displays each of the program area's share of the FY2000 DDFA budget.

Figure 1. FY 2000 DDFA Funding, by Program Area

II. Major Technical Focus for FY 2000

Beginning in FY 1999, the DDFA organized its work according to four major Product Lines: Reactor Facilities, Radionuclides Separation Facilities, Fuel and Weapons Component Fabrication Facilities, and Laboratory Facilities. These Product Lines are consistent with the process facility types presented in Linking Legacies (Figure 2).

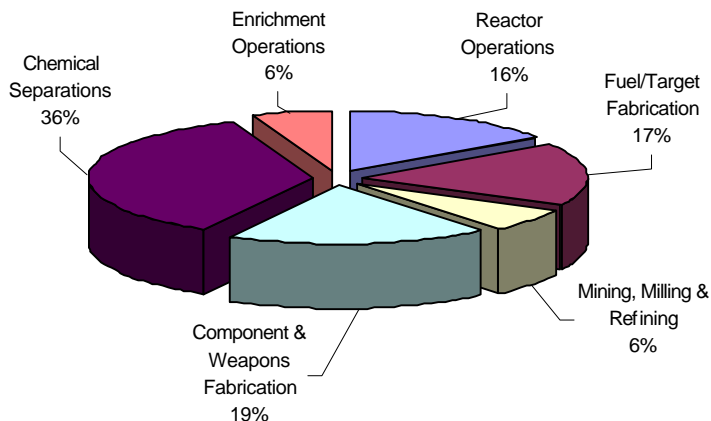


Figure 2. DOE/EM Surplus Facilities by Weapons Process Category

The FY1999 through FY2001 budgets for each of the product lines are shown in Table 2. Table 2 excludes University Programs and the EM Science Program budgets, as well as program management support. DDFA product lines funded in FY2000 are described below. For more information on DDFA's product lines and their associated work packages, refer to DDFA's FY2000-2004 Multi-Year Program Plan.

Table 2. DDFA Funding, by Product Line	FY99	FY00	FY01
Reactor Facilities	\$4,929	\$2,608	\$460
Radionuclide Separation Facilities	\$5,851	\$4,990	\$5,279
Fuel & Weapon Components Fabrication Facilities	\$360	\$5,784	\$5,089
Laboratory Facilities	\$3,080	\$0	\$0

A) Product Line: Reactor Facilities

DOE's surplus production reactors—Hanford has nine and Savannah River has five—represent a significant portion of the long-term D&D mortgage. There also exist over 100 test and research reactors throughout DOE (INEEL has more than 50) and at U.S. universities. More than half have already been placed in shutdown mode. In addition to these DOE and university reactors, many of the 109 U.S. commercial nuclear power reactors are approaching their life expectancy. New and improved technologies are required to facilitate lower cost and reduced risk for D&D of these reactors. The field development of improved technologies and systems will be implemented by EM's Crosscutting Programs and through industry and university participation through FETC's Industry/University Programs. A key contributor to the R&D conducted in this work package will be the Electric Power Research Institute (EPRI). Through DOE's MOU with EPRI and the commercial nuclear utilities, problems common to both DOE and the private sector will be addressed.

In previous years (FY1995 through FY1998) efforts within this product line focused primarily on decontamination and dismantlement of the reactor core and reactor building. Beginning in FY1999, the DDFA shifted priorities within this product line to address needs associated with the contaminated fuel storage pools and the associated structures supporting reactor operations. The current effort focuses on improved technologies for characterization, decontamination and dismantlement of surplus facilities at INEEL's Test Area North (TAN) and Test Reactor Area (TRA). Activities within this product line will significantly reduce mortgage by providing the technologies to accelerate D&D, thereby reducing the surveillance and maintenance (S&M) requirements by maintaining surplus facilities in a safe condition and meeting the requirements found in CRF41-101.47.400.

Monitoring and deactivation efforts associated with Savannah River's Receiving Basin for Offsite Fuels (RBOF) facility will also benefit from technologies developed and demonstrated within the Reactor Facilities Product Line. Albeit Hanford's K-Basin needs were transferred from DDFA to the Nuclear Materials Stabilization Focus Area in FY1999, this product line will also substantially assist the future deactivation decisions for the K-basin by developing, demonstrating, and deploying improved characterization, decontamination, size reduction, and treatment technologies applicable to the technological needs associated with this facility.

Finally, this product line will assist the commercial nuclear utility industry, which also faces D&D of similar complex facilities. For this reason, the commercial nuclear utility industry will be a key participant and directly involved in this effort. Without these technologies, DOE sites and private industry will be forced to adhere to their original technical baselines which will increase the cost, increase worker risk, and extend schedules to complete D&D of these facilities.

B) Product Line: Radionuclide Separation Facilities

Separation process facilities represent the largest portion of EM's surplus facility inventory. These facilities include chemical separations and enrichment operations designed primarily to produce plutonium and uranium. These aging structures are typically massive in size with high levels of contamination. Removal and disposition of radioactive and hazardous materials and equipment, deactivation of non-essential systems and utilities, and reconfiguration of systems to facilitate long-term S&M within these facilities with baseline technologies is very costly and poses high safety and health risks.

This product line will address specific problems and technical challenges associated with the five large fuel reprocessing canyons at Hanford and the F and H canyon facilities at Savannah River. Other massive facilities included in this product line are the Idaho Chemical Processing Plant (ICPP) and the three uranium enrichment facilities at Oak Ridge, Paducah and Portsmouth. Though smaller in size, the lithium processing, tritium processing, and heavy water production facilities included within this product line possess unique D&D challenges due to the contaminants found within these facilities.

DOE's processing and enrichment facilities typically contain large volumes of process equipment and piping. New systems are needed to effectively dismantle and remove these materials. Because of complex configurations and often times confined space limitations, placing workers in these environments not only poses a radiological hazard, but also a physical safety risk. Therefore, there

is a significant need for autonomous remotely operated systems. R&D activities within this product line will be coordinated with the Robotics Crosscut Program in an effort to develop semi- or fully-autonomous systems capable of performing routine, repetitive tasks.

As stated, the facilities addressed within this product line contain large volumes of process equipment and piping. Currently, a large portion of the material being removed from these facilities during D&D is disposed of as low-level waste at typically high life-cycle costs to the site. However, much of this material represents a valuable resource if only cost-effective methods can be developed to recycle the materials. New and improved processes to characterize, segregate (contaminated from non-contaminated portions), and decontaminate these materials are needed. The Characterization, Monitoring, and Sensor Technologies (CMST) Crosscut Program and Industry Programs will play a fundamental role in developing improved systems to promote the recycling or free release of high-value materials. These improved systems will have applications throughout the complex and will result in significant life-cycle cost savings to DOE.

C) Product Line: Fuel and Weapon Components Fabrication Facilities

Weapons components fabrication facilities include target fabrication facilities, weapons components fabrication and weapons assembly, dismantlement modification and maintenance facilities. These facilities represent some of DOE's most contaminated facilities; including facilities that contain highly fissile materials, and many facilities contaminated with numerous radioactive species, organics and high explosive materials. Many of these contaminants are extremely mobile, and if left unchecked pose a risk to the environment and surrounding communities. Due to the nature of many of these contaminants, the cost of conducting S&M, and Material Control and Accountability are exorbitant.

By nature of the activities conducted as part of their former weapons production mission, many of the facilities addressed within this product line have considerable volumes of TRU waste. Much of the TRU waste also contain hazardous constituents subject to regulation under Resource Conservation and Recovery Act (mixed TRU waste), and some contains PCBs subject to the Toxic Substances Control Act. Within this product line new and improved technologies and systems will be developed, demonstrated and deployed that will result in reducing the volume of TRU waste—either currently in storage or generated as a result of D&D operations—destined for WIPP. R&D efforts will be coordinated closely with CMST to develop improved systems for characterization and segregation of TRU waste fractions. Industry Programs will provide the lead role in developing (or adapting) technologies to treat/decontaminate and size reduce TRU contaminated materials and waste. These efforts will be closely coordinated with the Mixed Waste Focus Area so that duplication of activities does not occur. The major sites affected by progress in this product line are Pantex, Rocky Flats, SRS, NTS and LANL.

III. Significant Technologies/Projects

This section presents an overview of the major activities supported by DDFA in FY 2000. It is not intended to be all inclusive. More detailed project information can be found in the Long-Form Technical Task Plans, and detailed information on technology demonstrations and deployments can be found in Section VI of this document.

Fuel Storage Pools & Associated Structures D&D (ID# 2202) - Without improved D&D technologies including remotely-operated above-grade, below-grade, and underwater tools for characterization, decontamination, size reduction and waste disposal, INEEL will be forced to use baseline approaches. This LSDDP will demonstrate innovative technologies for characterization, decontamination, dismantlement, and waste treatment management. Improvements over baseline techniques will reduce D&D costs, reduce worker risk and exposure, decrease waste volumes, and accelerate D&D schedules, thereby reducing S&M requirements.

Deployment of Innovative Characterization Technologies and Implementation of the MARSSIM Process at Radiologically Contaminated Sites (ID# 2098) - One of the most significant issues facing planners of D&D projects is the cost associated with characterization of the facility. Uncertainty surrounding the quantity of data and the level of analysis needed for all phases of a project make it difficult to define the full scope of the project. Using the MARSSIM guidelines and innovative characterization technologies, BNL will establish optimal survey design criteria and methodologies, which will help sites across the complex reduce or eliminate unnecessary sampling, saving both time and money.

Canyon Disposition Initiative (ID#2206) - The DDFA supports Hanford Canyon Disposition Initiative (CDI) through the demonstration and deployment of innovative characterization and remote platform technologies. The CDI is evaluating the feasibility of using the five chemical processing facilities “canyons” in the 200 Area (B Plant, T Plant, U Plant, Plutonium Uranium Extraction Facility, and the Reduction Oxidation Plant) at the Hanford Site as an asset for disposal of low-level wastes instead of a mortgage liability to the Environmental Restoration (ER) Program. The 221-U Plant facility is being used as a pilot for this evaluation. The technologies deployed by the DDFA will support characterization of the facility leading to a Record of Decision for final disposition of the Hanford canyon facilities.

Oversized Transuranic Waste Laser Cutting System (ID# 1477) - Current baseline methods for size reducing contaminated equipment (e.g., glove boxes) are labor intensive, with personnel dressed in pressurized air suits and using hand-held mechanical cutting tools. This process is slow and subjects the workers to both radiological and physical hazards. The Nevada Test Site (NTS) will deploy an advanced laser cutting technology to size reduce oversized non-standard TRU waste boxes and their contents to fit into standard waste drums or boxes. The system is expected to reduce or eliminate much of the worker exposure and safety risks during cutting operations. Additionally, the system is expected to provide a 4.2 Return on Investment at NTS. Initial deployment of the laser cutting system at NTS is scheduled for FY 2001, with subsequent deployments at Rocky Flats and Hanford for contaminated glove boxes and other oversized TRU contaminated boxes.

Release of Concrete for Recycle from D&D Projects (ID# 2373) - Typically, concrete is only contaminated within the first few millimeters of the surface. Current practices entail decontaminating the concrete surfaces, disposing of the decontamination waste streams in licensed low level waste disposal facilities, demolishing the structure, and disposing of the concrete rubble and rebar at a construction and demolition landfill. Alternatively, some sites find it more economical to dispose of all the concrete in low level disposal rather than remove the contaminated portion. Both practices are expensive and place severe burden on ever diminishing land disposal capacity. Without improved technologies for characterization and treatment of contaminated concrete, these practices will continue. Furthermore, continuing the status quo will result in increased demand for virgin materials. This project will deploy proven technologies (e.g., radiation detectors and concrete crushers) at INEEL's Engineering Test Reactor Facility, and establish a methodology from which complex-wide protocols will be developed for the release of concrete from D&D operations for recycle or reuse. It is expected that implementation of this innovative methodology will save approximately \$1.6 million at INEEL alone, as well as accelerated D&D schedules.

Mound Tritium D&D (ID# 2201) - The Mound Tritium LSDDP will integrate and demonstrate a variety of improved and innovative, commercially available technologies on a radioactive full-scale facility undergoing safe shutdown. The three facilities addressed by this project include SW/R, T, HH. They contain over 1,000 linear feet of tritiated glove boxes, tritium contaminated oils, mercury and others (mixed waste), miles of piping system, uranium beds, molecular sieves, carbon/molecular traps, pumps, compressors and other equipment and portion of the tritiated duct work. Improved methods will be demonstrated which improve worker safety while achieving cost and schedule savings.

Rocky Flats D&D Initiative (ID# 2918) - Accelerated D&D of plutonium contaminated facilities at Rocky Flats cannot be completed on schedule without improved systems to characterize, decontaminate, size reduce/dismantle, and package equipment and structures. The RFI supports the design and procurement of a centralized, automated size reduction and packaging process for actinide contaminated glove boxes, tanks, and equipment. The system will include the following sub-systems: Building Containment Access Chamber; Onsite Transportation Package; Size Reducing & Material Handling System; Confinement System; and Assay System. The automated system will be designed to minimize direct worker exposure, minimize manpower requirements, and maximize throughput. This system will accelerate D&D of plutonium contaminated facilities at Rocky Flats, helping to achieve site closure commitments. The Centralized Size Reduction Facility will be completed in FY 2001 and will be extensively deployed in FY 2002 and FY 2003.

IV. Major Technical Milestones

OH08DD21 Complete Set C demonstrations (currently four demonstrations are planned in FY00; one in each quarter, and possibly an additional two will be scheduled)

9/30/2000

RF19DD21 Complete procurement of inter-building TRU waste transportation system and an automated modular system for TRU equipment size reduction and

waste packaging (RFI-Central Size Reduction Facility)	10/31/1999
RF19DD61 Complete deployment of the interim remote/robotic size reduction system (ID# 2916) for building 776	6/30/2000
ID08DD21 Complete selection of 22 technologies (cumulative from start of LSDDP)	3/30/2000
ID08DD21 Complete combined total (since start of LSDDP) of 13 technology demonstrations	8/1/2000
ID08DD21 Complete LSDDP and issue final report	9/30/2000
SR09DD61 Complete deployment of the 3-M Empore (ID# 1543) and NURES Nuclide Removal System (ID# 2937) for basin water cleanup	9/30/2000
NV09DD62 Complete deployment (at least one) of Surface Contamination Monitor (ID# 1942)	10/28/1999
CH29DD63 Implement the Multi-Agency Radiation Survey and Site Investigation Manual together with the deployment of two innovative technologies to conduct initial facility surveys for remediation planning of the Brookhaven Graphite Research Reactor	9/30/2000
AL08SD10 Deploy the Decontamination & Volume Reduction System (DVRS) for baseline disposition of oversized TRU material and waste	7/31/2000

For additional DDFA milestones see the FY 2000 performance metrics in file FY00perf.xls.

V. Significant Publications

Input to Annual Report to Congress	As requested by HQ, typically November
Innovative Technology Summary Reports	Draft, 90 days following demonstration(see performance metrics)
Technology Needs Response	January 31, 2000
EM R&D Program Plan	As requested by HQ
EM Science & Technology Strategic Plan	January 2000
Multi-Year Program Plan	September 30, 1999 & 2000
Technology Summary Sheets	As necessary
Deployment Fact Sheets	30 days following deployment verification by DDFA
Focus Area Annual Report	November 1999

VI. Indicators of Focus Area Performance

See file FY00perf.xls for FY 2000 DDFA performance metrics including:

- Technology Deployments
- Technology Demonstrations
- Technologies Ready for Implementation (RFI)
- High Priority Needs (HPN) Being Eliminated

At this time the DDFA does not expect to conduct any external peer reviews for any specific R&D projects in FY2000. Ongoing LSDDPs and R&D activities will be reviewed as part of our Midyear Program Review. In addition, four EMSP projects, scheduled for completion at the end of FY1999, will be reviewed internally for subsequent incorporation into the DDFA portfolio of R&D activities. For those projects that warrant further advancement, the DDFA will investigate the most efficient means of conducting follow-on work. Options include an industry solicitation through Industry Programs as well as incorporation into the Crosscut Program's efforts. The four projects of interest are:

EM SCIENCE PROGRAM FY1996 AWARDS		
55052	Advanced Sensing and Control Techniques to Facilitate Semi-Autonomous Decommissioning	This project involves basic research in the engineering sciences, studying automation of the cleanup of contaminated equipment and structures.
54914	Atmospheric-Pressure Plasma Cleaning of Contaminated Surfaces	This project involves basic research in the physical sciences, studying a new technique for cleanup of contaminated structures.
55380	In-Situ Spectro-Electrochemical Studies of Radionuclide Contaminated Surface Films on Metals and the Mechanism of their Formation and Dissolution	This project involves basic research in the physical sciences, with a view of developing techniques and processes for the cleanup of equipment contaminated with radioactivity.
54724	Synthesis of New Water-Soluble Metal-Binding Polymers: Combinatorial Chemistry Approach	This project involves basic research in chemistry, studying new approaches to the decontamination of hazardous wastes at DOE facilities.

A fifth EMSP project, not currently assigned to the DDFA by EMSP, but of interest in terms of potential D&D applications will also be reviewed. This project is:

55247	Sensors Using Molecular Recognition in Luminescent, Conductive Polymers	The purpose of this project is to develop sensor technology for detecting specific heavy metal ions, such as transition metals, lead, lanthanides, and actinides in waste streams. The sensing strategy uses molecular recognition of the metal ions by polymers that change their luminescence and conductivity properties upon metal binding.
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The **Risk Reduction** and **Cost Savings** tables requested in the APP guidance have not been provided at this time due to limitations accessing IPABS and AVS data. As this data becomes available and as these systems mature, the DDFA expects to be able to provide the data requested.

VII. Major Planning Documents

	<u>Delivery Date</u>
Initial Annual Performance Plan	September 30, 1999 & 2000
Multi-Year Program Plan	September 30, 1999 & 2000
Input to Annual Report to Congress	As requested by HQ, typically November
Final Annual Performance Plan	December 1, 1999
EM R&D Program Plan	As requested by HQ
EM Science & Technology Strategic Plan	January 2000
Environmental Quality R&D Portfolio	January 2000
Technology Needs Response	January 31, 2000
FY 2002 Corporate Review Budget	~ April 15, 2000
Final FY 2001 Program Execution Guidance	August 2000

VIII. Program-Sponsored Conferences, Workshops, or Stakeholder Activities

<u>Activity</u>	<u>Schedule Date</u>
Decontamination and Decommissioning Course; <i>Las Vegas, Nevada</i>	October 18-22, 1999
Eleventh Technology Information Exchange Workshop; <i>Las Vegas, Nevada</i>	October 26-27, 1999
Pollution Prevention Conference; <i>Albuquerque, New Mexico</i>	November 15-19, 1999
Waste Management '00; <i>Tucson, Arizona</i>	Feb. 17-March 2, 2000
DDFA Mid-Year Review; <i>Morgantown, West Virginia</i>	March 28-30, 2000
Eighth International Conference on Nuclear Engineering <i>Baltimore, Maryland</i>	April 2-6, 2000
The Fourth U.S. DOE International Decommissioning Symposium "IDS 2000;" <i>Knoxville, Tennessee</i>	June 12-16, 2000
Spectrum 2000; <i>Chattanooga, Tennessee</i>	September 24-28, 2000

OST Ref#	Tech Title	TTP	PBS	Planned Date	Performance Site	Planning Comments
2937	(Selion Graver) NURES Nuclide Removal System	SR09DD61	SR-FA08 to SR-FA13 & SR-20	Apr-00	SR	FY99 ASTD
1543	3-M Empore	SR09DD61	SR-FA08 to SR-FA13 & SR-20	Nov-99	SR	FY99 ASTD
1543	3-M Empore	SR09DD61	SR-FA08 to SR-FA13 & SR-20	Apr-00	SR	FY99 ASTD
2374	Implementation of MARSSIM Process	CH39DD63	CH-BRNLDD	FY00	CH	FY99 ASTD
2100	Remote Control Concrete Demolition System (Brokk)	na	ID-ER-110	FY00	ID	in IDMS; non-DDFA funded deployments
2303	Track Mounted Shear/Crusher	na	ID-ER-110	FY00	ID	in IDMS; non-DDFA funded deployments
2304	Hand Held Shear	na	ID-ER-110	FY00	ID	in IDMS; non-DDFA funded deployments
2317	Lead Paint Analyzer	na	ID-ER-110	FY00	ID	in IDMS; non-DDFA funded deployments
1898	Personal Ice Cooling System	na	ID-ER-110	FY00	ID	in IDMS; non-DDFA funded deployments
2322	D&D and Remediation Optimal Planning System	na	ID-ER-110	FY00	ID	in IDMS; non-DDFA funded deployments
2375	Ex Situ Large Bore Pipe Decon & Characterization System	FT07IP02	non-DOE	Oct-99	Charlevoix, MI	
1954	Sealed Seam Sack Suits	RL08DD21	RL-ER05	FY00	RL	in IDMS
tbd	Asbestos Destruction System		tbd	FY00	tbd	
2373	Release of Concrete for Recycle from D&D Projects	ID79DD61	ID-ER-110	FY00	ID	FY99 ASTD
1942	Position Sensitive Radiation Monitoring (SCM/SIMS)	NV09DD62	NV214	FY00	NV	
2243	Mobile Work Platform	OH19DD61	OH-FN-02	FY00	OH	FY99 ASTD; 2 deployments
2916	Remote/Robotic Size Reduction System for Building 776	RF19DD61	(RF019) RF016 to RF022	Jun-00	RF	FY99 ASTD
2242	Decontamination & Volume Reduction System	AL08SD10	AL009, AL012, AL013, AL030	Jul-00	LANL	FY98 ASTD
1899	Soft Media Blasting for multiple decon activities	HQ06PS11	SR-HL05	tbd	SRS	
1840 or 2402	2-D Gamma Cam or 3-D Gamma Modeler	RL08DD21	RL-ER05	tbd	Hanford U-Plant	CDI
2403	Non-Intrusive Liquid Level Detection System	RL08DD21	RL-ER05	tbd	Hanford U-Plant	CDI
tbd	Integrated Robotic Sampling Unit	RL08DD21	RL-ER05	tbd	Hanford U-Plant	CDI

PBS#	High Priority Need # (from NMS/IDMS)	Need Title	Work Package #	OST Ref#	Tech Title	Ready for Implementation (Gate 6)	Comments
Technical Needs & Opportunities							
AL012; AL013; AL009	AL-09-01-12-MW	Decontamination and Volume Reduction of TRU and LLW Metals	DD-12	2242	Decontamination & Volume Reduction System	late FY00	LANL ASTD/LSDDP
ID-HLW-101	ID-2.1.16	Decontamination Facility/Analytical Facility Waste Reduction	DD-14				Work Package DD-14 not funded in FY99-FY01
ID-WM-101	ID-3.1.45	Volumetric Radioassay of Lead Sheet, Plate, Shot, & Irregular Shapes for "No DOE Rad Added" Determinations	DD-02	tbd			FIU investigation in FY00; possible LSDDP demonstration in FY00
OH-MB-02	OH-M901	Improved Facility Survey Techniques	DD-01	tbd	QP Direct Reading Surface Tritium Proportional Counter System; Solid State Pin Diode Direct Reading Surface Tritium Detector; Rad Elec Passive Tritium Air & Surface Monitor	late FY00 thru early FY02	Mound LSDDP; various demonstrations planned in FY00
OH-MB-02	OH-M905	Treatment of Tritiated Pump Oils and Mercury	DD-01	2313	NOCHAR Tritiated Oil Solidification Process	1st Qtr FY00	Mound LSDDP; demonstrated in FY99
OH-WV-02	OH-WV902	Decontamination of HLW Canisters	DD-14	1899	Soft Media Blast Cleaning		Work Package DD-14 not funded in FY99-FY01; possible funding (TMS 1899) in FY00 through AEA International Agreement
OH-WV-04	OH-WV903	Vitrification Expended Material Processing	DD-14	1899	Soft Media Blast Cleaning		Work Package DD-14 not funded in FY99-FY01; possible funding (TMS 1899) in FY00 through AEA International Agreement
OK-010	OK99-23	Field Surveillance Device for Detection of Radium-226	na				DDFA does not consider this a D&D Need; should be transferred to SCFA
RL-TP05	RL-DD02	Glove Box Volume Size Reduction System for PFP	DD-12	1477; 2242; 2916 & 2918	Laser Cutting & Size Reduction; Decontamination & Volume Reduction System; Remote/Robotic Size Reduction System; & RFI Central Size Reduction facility	late FY00 thru early FY02	Glovebox Size Reduction is currently being addressed by the NV ASTD; LANL ASTD/LSDDP; Rocky Flats ASTDs, and RFI
RL-TP05	RL-DD03	Terminal Clean-out and TRU Waste Decontamination of PFP	DD-12				no direct support at this time
RL-TP05	RL-DD04	TRU Waste Fixatives for PFP	DD-12	2314	Srippable Coatings & Fixatives (ALARA 1146 Cavity Decon)	late FY99 or early FY00	SRS FY99 demonstrated technology may apply

PBS#	High Priority Need # (from NMS/IDMS)	Need Title	Work Package #	OST Ref#	Tech Title	Ready for Implementation (Gate 6)	Comments
RL-ER06	RL-DD017	Segregation of Waste for the D&D Program for the Purpose of Disposal	DD-05				Marginal FY00 funding (FIU) to identify multiple sensor arrays for material/waste segregation; planned FY01 LSDDP new start
RL-ER06	RL-DD029	Critically Safe Vacuum System for 233-S	DD-08				no direct support at this time
RL-ER06	RL-DD030	Cutting Plutonium Contaminated Pipe for 233-S	DD-08				no direct support at this time
RL-ER06	RL-DD031	Non-Intrusive Detection of Pipe Contents for 233-S	DD-08				no direct support at this time
RL-ER06	RL-DD032	Contamination Fixative for 233-S	DD-08	2314	Srippable Coatings & Fixatives (ALARA 1146 Cavity Decon)	late FY99 or early FY00	SRS FY99 demonstrated technology may apply
RL-ER05	RL-DD034	Remote/Robotic Technologies for Access and Deployment of Characterization and Sampling Tools for CDI	DD-03	2178	CDI Remote Characterization System (Andros)	FY99	
RL-ER05	RL-DD037	Detection of Free Standing Liquid in Equipmant (e.g., tanks) and Piping for CDI	DD-03	2403	Non-Intrusive Liquid Level Detection System	1st Qtr FY01	
RL-ER05	RL-DD050	Sealant Technologies for CDI	DD-03				New Need submitted subsequent to FY01 CRB; detail functional requirements not yet processed
RL-ER05	RL-DD051	High Profile Surface Barrier for CDI	DD-03				New Need submitted subsequent to FY01 CRB; technical solution should be coordinated with SCFA
RL-ER06	RL-DD061	Remote systems for characterization and clean up of the 233-S Process Hood	DD-08				New Need submitted subsequent to FY01 CRB; detail functional requirements not yet processed
Science Needs & Opportunities							
AL009	AL-09-01-02-DD-S	Radiological Air Monitoring Needs for Current D&D/ER Operations	DD-12	2225	Fast Response Isotopic Alpha Continuous Emissions Monitor		New FY99 Science Need also being addressed by EMSP #60163 & 60474
AL009	AL-09-01-04-DD-S	Methodology for Effective D&D of Large Environmental Sites	DD-12				
RL-TP02	RL-DD023-S	Cesium Source Identification	DD-14				Work Package DD-14 not funded in FY99-FY01; EMSP # 55247 & 64982 may apply
RL-TP05 & RL-TP08	RL-DD025-S	Effluent Capture	DD-12 & DD-07				EMSP #60163 may apply
RL-TP05, RL-TP08 & RL-ER06	RL-DD026-S	Contaminant Binding Science Need	DD-12, DD-07, DD-08 & DD-05				EMSP # 55380, 54724, 59925, 64865 & 64912 may apply
RL-TP02	RL-DD029-S	Algae Corrosion and Growth Inhibition	DD-14				New Science Need submitted subsequent to FY01 CRB; Work Package DD-14 not funded in FY99-01
RL-TP05	RL-DD030-S	Polystyrene Cube Analysis for the Plutonium Finishing Plant (PFP)	DD-12				New Science Need submitted subsequent to FY01 CRB

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